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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,611

09/28/2004

Tatsuya Kawakami

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DELAND LAW OFFICE

P.O. BOX 69

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EXAMINER

LUONG, VINH

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

03/25/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/711,611	Applicant(s) KAWAKAMI, TATSUYA	
	Examiner Vinh T. Luong	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-21, 23, 24 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2008 and 28 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3656

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 16, 2010 has been entered.
2. The restriction and Applicant's election of the species of FIGS. 5-6B without traverse in the reply filed on January 16, 2008 in parent application are carried over to the instant RCE. See MPEP § 819.
3. Claim 22 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on January 16, 2008.
4. The drawings were received on January 16, 2008. These drawings are not accepted by the Examiner because the drawings are inconsistent with the specification. Please see 37 CFR 1.121(e). For example, ¶ 16 of the specification describes:

Base plate 22 includes an upstanding cable guide flange 94 with a cable guide opening 98 for receiving an inner cable 102 (FIG. 3) of a Bowden cable assembly (not shown) therethrough. An upstanding cable winding stop 106 is provided for limiting counterclockwise rotation of winding lever assembly 26, and an upstanding combination stop 110 is provided for limiting clockwise rotation of winding lever assembly 26 and counterclockwise rotation of release lever 40. *An elongated opening 114 is provided for receiving a lower end of a mounting axle 118 of positioning pawl 41 therein, and a spring mounting opening 122 is provided for mounting an end 126 of return spring 38 therein.* A central opening 127 is provided for receiving support post 78 therethrough. Support opening 127 includes a pair of opposed recesses 127A for engaging corresponding mounting ears 44A of bushing 44 to nonrotatably mount bushing 44 to base plate 22. (Emphasis added).

However, FIG. 2 shows that the axle 118 is received in the spring mounting opening 122 instead of the elongated opening 114. In other words, FIG. 2 is inconsistent with FIGS. 3-5.

5. The drawings are objected to because the drawings are inconsistent with the specification as set forth above.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3-21, 23, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troiano (US 6,105,459) in view of Liu et al. (US 6,497,163).

Claim 1

Art Unit: 3656

Troiano teaches an apparatus comprising:

a first engaging member 32;

a movable second engaging member 20;

wherein the first engaging member 32 engages the second engaging member 20; and

a biasing mechanism 45, 46, 48, 52, 54 (c. 3, ll. 1-14) that applies a biasing force to bias the first engaging member 32 at a first biasing location (e.g., FIG. 4, i.e., a high tension, applied position, c. 2, ll. 3-5) on the first engaging member 32 so that the first engaging member 32 engages the second engaging member 20;

wherein, while the first engaging member 32 engages the second engaging member 20 and the second engaging member 20 moves, the biasing mechanism 45, 46, 48, 52, 54 is capable of changing the location of the application of the biasing force from the first biasing location (e.g., FIG. 4) on the first engaging member 32 to a different second biasing location (e.g., FIG. 3, i.e., a low tension, released position, c. 1, l. 66 – c. 2, l. 2) on the first engaging member 32 so that an engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the second biasing location (e.g., FIG. 3) is less than the engaging force applied between the first engaging member 32 and the second engaging member 20 when the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the first biasing location.

Troiano's apparatus is capable of performing the claimed function:

“wherein, while the first engaging member engages the second engaging member and the second engaging member moves, the biasing mechanism changes the location of the application of the biasing force from the first biasing location on the first engaging member to a different second biasing location on the first engaging member so that an engaging force applied between the

Art Unit: 3656

first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the second biasing location is less than the engaging force applied between the first engaging member and the second engaging member when the biasing mechanism applies the biasing force to the first biasing location;”

In fact, by comparing Applicant’s FIG. 5 and Troiano’s FIGS. 2-5, Troiano’s cam 48 slides (changes the location) on Troiano’s first engaging member 32 in the same manner as Applicant’s interface member 212 that slides (changes the location) on Applicant’s first engaging member 41, and Troiano’s spring 45 biases Troiano’s cam 48 in the same manner as Applicant’s spring 208 that biases Applicant’s interface member 212. (Troiano, c. 3, l. 15 - c. 4, l. 9, and claims 1-3).

Moreover, Troiano teaches the functional limitation “to change a distance between the axle and the location of the biasing force on the first engaging member.” As seen in FIGS. 3-5, the distance between the axle 31 and the location 48 of the biasing force 45 on the first engaging member or pawl 32 is changed accordingly with the movement of the pawl 32.

Troiano teaches the invention substantially as claimed. However, Troiano’s first engaging member does not pivot around an axle mounted to the first engaging member so that the axle is carried by the first engaging member and moves therewith in order to perform the claimed function “wherein movement of the first engaging member in response to movement of the second engaging member causes the axle to move so as to change a distance between the axle and the location of the application of the biasing force on the first engaging member.” In summary, Troiano’s slot 41 is formed on the pawl 32 and Troiano’s axle 31 is mounted on the plate 18 as seen in Troiano’s FIGS. 3 and 4, meanwhile, Applicant’s slot 114 is formed on the

Art Unit: 3656

plate 22 and Applicant's axle 118 is mounted on the pawl 41 as seen in Applicant's FIG. 2. Put differently, Applicant reversed the parts 41 and 31 of Troiano.

Liu teaches the first engaging member 35 pivoting around an axle 34 (FIG. 2) mounted to the first engaging member 34 so that the axle 34 is carried by the first engaging member 35 and moves therewith and so that the movement of the first engaging member 35 in response to movement of the second engaging member 22 causes the axle 34 to move.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the axle and the slot of Troiano by mounting the axle on the first engaging member (and forming the slot on the plate) so that the axle is carried by the first engaging member and moves therewith and so that the movement of the first engaging member in response to movement of the second engaging member causes the axle to move as taught or suggested by Liu. The reversal of Troiano's axle and slot as taught or suggested by Liu would not have been uniquely challenging to a person of ordinary skill in the art because it is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement" *KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) and it "does no more than yield predictable results." *KSR* at 1739. See also *stare decisis* regarding reversal of parts in MPEP § 2144.04.

Claim 3

Troiano's second engaging member 20 comprises a positioning unit 20. Referring the second engaging member to a merely inferentially included element or an intended use element, such as, a bicycle shift control device is not accorded patentable weight. As noted, a recitation of the intended use of the claimed invention must result in a structural difference between the

Art Unit: 3656

claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then, it meets the claim. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). On the other hand, it is well settled that the claims drawn to an apparatus must distinguish from prior art in terms of structure rather than function. *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997); *In re Danly*, 120 USPQ 528 (CCPA 1959); *Ex parte Masham*, 2 USPQ2d 1647 (BPAI 1987) and MPEP § 2114.

Claim 4

Troiano's first engaging member 32 comprises a positioning member 32 that engages the positioning unit 20 to maintain the positioning unit 20 in a selected position.

Claim 5

Troiano's biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the positioning member 32.

Claim 6

Troiano's positioning member 32 and biasing mechanism 45, 46, 48, 52, 54 move relative to the other to reduce the biasing force when the positioning unit 20 moves. Troiano, c. 3, l. 15 - c. 4, l. 9.

Claim 7

Troiano's positioning member 32 moves in response to movement of the positioning unit.

Claim 8

Art Unit: 3656

Troiano's positioning member 32 moves or is capable of moving relative to the biasing mechanism 45, 46, 48, 52, 54 when the positioning unit 20 moves so that the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different biasing location.

Claim 9

Troiano's positioning member 32 moves or is capable of moving together with the positioning unit 20 when the positioning unit 20 moves.

Claim 10

The movement of Troiano's positioning member 32 causes the biasing mechanism 45, 46, 48, 52, 54 to apply the biasing force to the different biasing location.

Claim 11

Troiano's positioning unit 20 comprises a plurality of positioning teeth 30, and wherein the positioning member 32 comprises a positioning pawl 32 that engages selected ones of the plurality of positioning teeth 30 to maintain the positioning unit 20 in the selected position.

Claim 12

Troiano's positioning unit 20 and positioning pawl 32 move relative to each other so that the positioning pawl 32 moves over at least one of the plurality of positioning teeth 30, and wherein the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different second biasing location so that the biasing force is reduced when the positioning member 32 moves over the at least one of the plurality of positioning teeth 30.

Claim 13

Art Unit: 3656

Troiano's biasing mechanism 45, 46, 48, 52, 54 increases or is capable of increasing the biasing force to the positioning member 32 after the positioning member 32 moves over the at least one of the plurality of positioning teeth 30.

Claim 14

Troiano's biasing mechanism 45, 46, 48, 52, 54 applies or is capable of applying the biasing force to substantially the same biasing location before and after the positioning member 32 moves over the at least one of the plurality of positioning teeth 30.

Claim 15

Troiano's positioning pawl 32 moves or is capable of moving relative to the biasing mechanism 45, 46, 48, 52, 54 when the positioning unit 20 moves so that the biasing mechanism 45, 46, 48, 52, 54 applies the biasing force to the different second biasing location.

Claim 16

Troiano's positioning pawl 32 moves or is capable of moving together with the positioning unit 20 when the positioning unit 20 moves.

Claim 17

The movement of Troiano's positioning member 32 causes the biasing mechanism 45, 46, 48, 52, 54 to apply the biasing force to the different second biasing location (FIGS. 2-5).

Claim 18

Troiano's mounting member 24 supports the positioning unit 20 and the positioning pawl 32, and wherein the biasing mechanism 45, 46, 48, 52, 54 is secured relative to the mounting member 24.

Claim 19

Art Unit: 3656

Troiano's positioning unit 20 rotates to move the positioning pawl 32.

Claims 20 and 21

Troiano's biasing mechanism 45, 46, 48, 52, 54 comprises a coil spring 45.

Claim 23

The movement of Troiano's second engaging member 20 is capable of causing the biasing mechanism 45, 46, 48, 52, 54 to reduce the biasing force applied to the first engaging member 32. It is well settled that the "wherein" or "whereby" clause that merely states the inherent results of limitations in the claim adds nothing to the claim's patentability or substance. *Texas Instruments Inc. v. International Trade Commission*, 26 USPQ2d 1018 (Fed. Cir. 1993); *Griffin v. Bertina*, 62 USPQ2d 1431 (Fed. Cir. 2002); and *Amazon.com Inc. v. Barnesand-noble.com Inc.*, 57 USPQ2d 1747 (Fed. Cir. 2001).

Claim 24

The biasing force applied by Troiano's biasing mechanism 45, 46, 48, 52, 54 is capable of changing from a first value to a second value while the second engaging member 20 is moving and the first engaging member 32 is contacting the second engaging member 20. *Texas Instruments Inc. v. International Trade Commission, supra*.

Claim 26

Troiano's positioning member 32 moves around a rotational axis 26 of the positioning unit 20 (by a lost motion linkage 31 and 36).

8. Claim 1 is further rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (US 6,497,163) in view of Shimano (US 4,343,201).

Art Unit: 3656

Liu teaches an apparatus for reducing an engaging force of an engaging member for a bicycle component comprising:

a first engaging member 35 that pivots around an axle 34 so that the axle 34 is carried by the first engaging member 35 and moves therewith;

a movable second engaging member 22;

wherein the first engaging member 35 engages the second engaging member 22; and

a biasing mechanism 36 that applies a biasing force to bias the first engaging member 35 at a biasing location (e.g., FIG. 3) on the first engaging member 35 so that the first engaging member 35 engages the second engaging member 22;

wherein while the first engaging member 35 engages the second engaging member 22 and the second engaging member 22 moves, the biasing mechanism 36 applies the biasing force to said biasing location (e.g., FIG. 5) on the first engaging member 35; and

wherein movement of the first engaging member 35 in response to movement of the second engaging member 22 causes the axle 34 to move.

In summary, Liu teaches the invention substantially as claimed. However, Liu's biasing mechanism applies the biasing force to bias the first engaging member at the same biasing location instead of different locations.

Shimano teaches the biasing mechanism 34, 35 applies the biasing force to bias the engaging member 45 at different locations so that a rider may operate the bicycle shift control device (FIGS. 1-3) with a light touch for changing the bicycle speed.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the biasing mechanism that applies the biasing force to bias Liu's

Art Unit: 3656

engaging member at different locations so that the rider may operate the bicycle shift control device with a light touch for changing the bicycle speed as taught or suggested by Shimano. *KSR, supra*.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kawakami'502 (claims 1-7), Kawakami'288 (claims 1-89), Tagawa (spring 59, 60), and Campagnolo (spring 23).

10. Applicant's arguments filed February 16, 2010 have been fully considered but they are not persuasive.

The rejections under 35 USC 102(b) and 103 based on Troiano are withdrawn in view of Applicant's amendments to the claims. Applicant's arguments with respect to claims 1, 3-21, 23, 24, and 26 have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vinh T Luong/
Primary Examiner, Art Unit 3656